

AMENDMENTS TO THE SPECIFICATION

IN THE ABSTRACT OF THE DISCLOSURE:

Replace the Abstract of the Disclosure currently of record with the new Abstract of the Disclosure attached to the end of this amendment.

**The abstract has been amended as follows:**

~~A method of collecting volatile constituents, capable of surely collecting volatile constituents contained in a solid such as leaf tobacco~~ A method and apparatus for ensuring the collecting volatile constituents contained in a solid sample S such as leaf tobacco. In particular, a sample vessel 10 for containing a sample of a solid containing volatile constituents, a gas feeding device 16 for filling the sample vessel with inert gas, a thermostatic chamber 12 for containing the sample vessel and keeping the sample contained in the sample vessel at a predetermined temperature, and a canister 20 designed to be depressurized in advance and selectively connected to the sample vessel are provided. The sample vessel containing the sample S is filled with inert gas, and the sample S is kept at a predetermined temperature. ~~Thereafter, the canister depressurized in advance is connected to the sample vessel, and constituents evaporating and escaping from the sample are collected~~ Thereafter, the depressurized canister is connected

to the sample vessel, and the constituents evaporating and/or  
escaping from the sample are collected.

SPECIFICATION

Please amend paragraph on page 1, line 33 bridging page 2, line 15 as follows:

However, when constituents G evaporating from a sample S are collected in the above-described manners, the respective amounts of the constituents (quantitative relation between the constituents) change under some conditions about heating of the sample S. For example, when heated, constituents contained in a sample S may be thermally decomposed and produce unexpected secondary products. Further, constituents G which evaporate from the sample S vary in volatility, from a high volatility to a low volatility. For example, pressure of a constituent G which is high in volatility and evaporates from the sample S in the hermetic container 1 earliest (inner pressure) may prevent a constituent G which is low in volatility from evaporating from the sample S and make it difficult to collect the latter constituent G. ~~Thus, it is difficult to surely collect volatile constituents which are different in volatility and analyse them accurately~~ Thus, it is difficult to ensure the collection of volatile constituents which are different in volatility and then to analyze them accurately.

Please amend paragraph on page 2, lines 18-23, as follows:

~~An object of the invention is to provide an apparatus and~~

~~method for extracting volatile constituents, capable of surely collecting volatile constituents contained in a sample of a solid such as leaf tobacco or flour to subject them to, for example, constituent analysis by atmospheric concentration analysis or sensory evaluation by a human sense of smell~~ An object of this invention is to provide a method and apparatus for ensuring the extracting and collecting of volatile constituents contained in a solid sample such as leaf tobacco or flour. It is then an object of this invention to perform an analysis on the collected constituents using either an atmospheric concentration technique or a sensory evaluation, i.e. human sense of smell.

**Please amend paragraph on page 2, lines 24-32, as follows:**

In order to achieve the above object, the invention is characterized in that a sample of a solid containing volatile constituents is put in a hermetic sample vessel (hermetic can) with inert gas, and a canister, depressurized in advance, is selectively connected to the sample vessel so that the sample vessel will be depressurized in a moment and constituents evaporating from the sample will be collected into the canister. Thus, the volatile constituents can be extracted from the sample without heating the sample.

**Please amend paragraph on page 3, lines 21-31, as follows:**

A method of extracting volatile constituents according to the present invention comprises the steps of putting a sample containing volatile constituents in a sample vessel, then filling the sample vessel containing the sample with inert gas and keeping the sample at a predetermined temperature (a temperature at which the volatile constituents do not evaporate through thermal decomposition of the sample ~~does not happen~~, for example, an ordinary temperature), and thereafter selectively connecting a canister depressurized in advance to the sample vessel to thereby collect constituents evaporating from the sample under depressurization, into the canister with the inert gas in a moment.

**Please amend paragraph on page 5, lines 17-28, as follows:**

FIG. 1 is an illustration schematically showing a structure of an apparatus for extracting volatile constituents according to an embodiment of the invention. Reference numeral 10 denotes a sample vessel for containing a sample S of a solid containing volatile constituents such as leaf tobacco, and 12 is a thermostatic chamber for containing the sample vessel 10 and keeping the sample S contained in the sample vessel 10 at a predetermined temperature. To the sample vessel 10 is connected a carrier gas cylinder (bag) 16 with a gas feeding valve 14 between, so that inert gas such as He or N<sub>2</sub> can be fed from the carrier gas cylinder (bag) 16 into the

sample vessel 10.

Please amend paragraph on page 6, lines 5-18, as follows:

A canister 20 is globular in shape and used as a collecting container is selectively connected to the sample vessel 10 with a collecting valve 18 between. The canister 20 is depressurized to about  $1 \times 10^2 \text{ Pa}$  (1/1000atm) in advance, and has a capacity of, for example, about 6 liter. The inside of the canister 20 is ~~inactivated~~ depressurized in advance. By connecting the depressurized canister 20 to the sample vessel 10 and opening the collecting valve 18, the inside of the sample vessel 10 is depressurized rapidly. Thus, volatile constituents G of the sample S evaporate from the sample S in a moment and are sucked into the canister 20 with negative pressure and collected in the canister 20 with the inert gas. Reference numeral 19 in FIG. 1 denotes a heater for heating the gas (volatile constituents G of the sample S) collected in the canister 20.

Please amend paragraph on page 7, lines 9-23, as follows:

Further, the canister 20 depressurized in advance is selectively connected to the sample vessel 10 which is filled with inert gas and kept at a fixed pressure inside, to thereby decrease the pressure in the sample vessel 10 rapidly. Thus, various volatile constituents G contained in the sample S can evaporate in

a moment, and be taken (collected) into the canister 20. As a result, problems with the analysis using the conventional head space headspace method, specifically, troubles such as balance of collected constituents getting disturbed can be prevented effectively. Further, by controlling the pressure difference between the sample vessel 10 and the canister 20, out of the volatile constituents contained in the sample S, intended volatile constituents can be surely collected, irrespective of degree of volatility, from highly volatile constituents to low volatile constituents.